

REMARKS/ARGUMENTS

1. Concerning Section 112, 2nd paragraph, rejections.

Claim 7 and claim 27 stand rejected as being indefinite. While Applicants traverse the contention that the claims are indefinite, in the interests of expedited prosecution, the offending word "general" is deleted. The amended claims are thus understood to meet the requirements of 35 U.S.C. § 112, second paragraph.

The final office action objects to the expression "tetrabromobenzoate ester-containing product" pursuant to 35 U.S.C. § 112, second paragraph. Applicants traverse this rejection.

In the specification, the alleged offending term is used in paragraphs [0022] through [0027], inclusive, wherein the impact of reaction conditions on the preferred product yield is discussed. Applicants submit the alleged offending term is clear to those of ordinary skill in the art consistent with the explanation provided in the noted paragraphs.

The Final Office Action urges the complained of phrase "would mean there are other components present in the product besides the tetrabromobenzoate ester". The claims rejected: 1, 15, 19, 27 32, and 34 are 'open-ended' claims which permissibly "leav[e] the claim open for the inclusion of unspecified ingredients". *Ex parte Davis* 80 USPQ 448 450 (POBA, 1949). Claims in 'open-ended' format may not be rejected for admitting additional components.

Accordingly, the rejection of claims pursuant to 35 U.S.C. § 112, second paragraph, is improper and should be withdrawn.

2. Rejection of claims 19-32 pursuant to 35 U.S.C. § 102 (b) as anticipated by U.S. Patent 5,637,757, specifically example 5 thereof, Col. 8, lines 10-27.

Claim 19 and claims 20-32 depending there from call for feeding reactants to a "reactor [that] contains a product mixture, the product mixture comprising tetrabromo-benzoate ester at the at least one reactor having a temperature that favors decarboxylation over esterification . . .".

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The '757 reference describes a reaction mixture that "was brought to reflux" apparently from ambient conditions. So far as applicants can determine, and the Examiner directs applicants to no content to the contrary (37 CFR §1.104(c)(2)) the '757 reference does not teach or suggest adding reactants to a vessel containing a benzoate ester at the temperature specified. Moreover, the final office action has not identified a teaching or suggestion in the '757 reference that the reactants are added to a benzoate ester at the temperature specified. Since the '757 reference does not include all the elements of applicants claimed invention, the '757 reference cannot anticipate claims 19-32.

A rejection for anticipation under section 102 requires that each and every limitation of the claimed invention be disclosed in a single prior art reference.

In re Paulsen 30 F.3d 1475, 1478-9, 31 USPQ2d 1671, 1673 (Fed. Cir., 1994).

The pending claims, 19-32 stand clearly distinguished from the '757 reference in at least this regard.

Since the '757 reference fails to disclose all elements of the instant claims, the reference may not anticipate the claimed invention.

3. Rejection of claims pursuant to 35 U.S.C. § 103 (a).

Claims 1-35 stand rejected pursuant to 35 U.S.C. § 103 (a) over U.S. Patent 5,637,757 in view of U.S. Patent 4,375,551.

The final office action urges that the claimed "pre-heat [ing] of the reaction mixture to the favorable decarboxylation temperature" follows from the '551 reference, Col. 3, lines 27-30. Final Office Action, p. 5. Applicants find this assertion unsupported by the reference cited.

A prior art reference must be considered "as a whole" 35 U.S.C. § 103 (a); *In re Lee* 227 F.3d 1338, 61 USPQ2d, 1430 (Fed.Cir., 2002); *Phillips v AWH Corp.* ____ F.3d ___, ___ USPQ2d ___, slip op. p. 18 (Fed. Cir., July 12, 2005). The entire context of the '551 reference includes

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Col. 3, lines 24-35. These lines describe the "first step reaction" (line 34) which is preparation of the allylic half-ester. Col. 1, lines 62-68. Decarboxylation is not involved in the lines specifically referenced by the Final Office Action: Col. 3, lines 27 – 30. The specifically referenced language describes "[t]his first step reaction", to wit: semi-esterification. It is to be noted that the second step reaction also does not involve decarboxylation, but involves esterification of the second carboxylate on the phthalate starting material to form the diester. Reference in the final office action to "pre-heat the reaction mixture to the favorable decarboxylation temperature" finds no basis in the '551 reference. The '551 reference is not directed to decarboxylation. Consequently, the conclusion drawn there from regarding the expectations of a skilled artisan are also misplaced.

Furthermore, the '551 reference concerns "the production of diallylic esters of tetrabromophthalic acid." Col. 1, lines 5 – 6. Independent claim 19 of the instant application calls for a "temperature that favors decarboxylation over esterification". The '551 reference seeks esterification over decarboxylation. The '551 reference is cited in the Final Office Action for a proposition directly opposite of its teachings. A reference that 'teaches away' generally may not be a basis of an obviousness rejection. *In re Gurley*, 27 F3d, 551, 553, 31 USPQ 2d 1130 (Fed. Cir., 1994).

The final office action urges that the '551 reference teaches recycle at Col. 3, lines 55-57. The reference passage also must be considered in a context of the entire reference. Applicants' claims are directed to adding the phthalate half-ester intermediate to a reactor containing a product mixture at a temperature that favors decarboxylation over esterification. The cited portion of the '551 reference discloses recovery of a phthalate diester from the reaction solvent. The recovery is accomplished by "cooling the solution to room temperature to cause crystallization of the diester . . .". Next, it is disclosed that "[t]he [cooled] solution from which the diester was separated can be recycled to the process . . .". Col. 3, lines 55-57.

Taken as a whole, the '551 reference discloses recycle of a cooled solution. In contrast, applicants' claims are directed to the use of reactors containing tetrabromo-benzoate ester at

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temperatures that favor decarboxylation over esterification. The alleged comparison is of two different compounds: phthalate half-ester vs. phthalate diester. Further, the solution of the '551 reference does not disclose tetrabromo-benzoate content according to applicants' claims. Rejection of claims for obviousness requires that a combination of references arrive at the claimed invention. *ACS Hospital Systems, Inc. v Montefiore Hospital*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984); *In re Geiger* 815 F.2d 686, 688, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987). The references of record, even when combined, do not arrive at the claimed invention.

The final office action relies on *In Re Dilnot* [sic, *Dilnot*] 319 F. 2d. 188, 138 USPQ 248 (CCPA, 1963) as support for assertion "that batch and continuous processes are not patentably distinct." Final Office Action p. 5. "*Dilnot* focused on a continuous step of a batch process. The final office action failed to consider improvements resulting from the continuous process as taught and claimed by applicants. Table 2 compared the batch preparation of tetrabromobenzoate ester with the taught and claimed continuous process of the instant application. The continuous process improves the quality of the desired benzoate ester as reflected by the improved color value. There is no teaching or suggestion in a reference of record that product quality improves from a continuous decarboxylation step. Moreover, *Dilnot* does not supply, or substitute for, the missing quality improvement.

Consequently, the rejection of the pending claims is obvious is improper because it is not supported by the references applied. Applicants request withdraw of the obviousness rejection as to claims 1-35.

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Applicants believe that no fees are due in connection with this submission, however, if any fees are necessary, please charge Deposit Account No. 02-0390, Baker & Daniels.

Respectfully Submitted,

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